REMARKS

Claims 1-3, 5-6, 9-10, 13 and 21 have been amended. Upon entry of this amendment, claims 1-21 will remain pending in the present application.

Claim 1 has been amended to insert the limitations of claim 5 therein.

Claim 2 has been amended to require at least one temperature sensor in direct contact with a surface of each acoustic detector. Basis for this amendment is found, for example, on page 13, lines 4-5 and Figures 20A-20C of the application as originally filed.

Claim 3 has been amended to require temperature control for both the block forming the sample well and a cover for the sample well. Basis for this amendment is found, for example, on page 7, line 25 to page 8, line 27, page 10, lines 10-28 and Figures 2 and 6 of the application as originally filed.

Claim 5 has been amended to incorporate the limitations of prior claim 3, and to require that the multiplexer be connected to a controller. Basis for this amendment can be found, for example, on page 11, lines 2-3 of the application as originally filed.

Claim 6 has been amended to capitalize "Fourier."

Claim 9 has been amended to require that the driving device is a Fourier transform frequency generator. Basis for this amendment is found in original claim 6.

Claim 10 has been amended in a manner similar to claim 1. Claim 13 has been amended in a manner similar to claim 2. Claim 21 has been amended in a manner similar to claim 3.

No new matter has been added.

The present invention, as claimed in claim 1, relates to a multi-channel acoustic measurement device. The device includes a plurality of sample chambers, a controller for controlling one or more conditions of said sample chambers, a plurality of acoustic detectors, a driving device connected to said plurality of acoustic detectors for causing a perturbation of said acoustic detectors, a multiplexer connected between said driving device and said acoustic detectors, and a data device for obtaining data from said acoustic detectors. Each acoustic detector includes a piezoelectric crystal and is located in one said sample chamber. The present invention, as claimed in claim 1, provides a device with the ability to run high throughput screening of multiple samples in parallel.

Claims 1-10, 20 and 21 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent no. 6,182,499 (McFarland et al.). This rejection, at least insofar as it applies to

claims 1-10, 20 and 21, as amended, is respectfully traversed and reconsideration is requested for the reasons which follow.

McFarland et al. discloses systems and methods for characterization of materials. Some embodiments of McFarland et al. employ plural sample chambers. McFarland et al. includes a temperature control system for controlling the temperature of samples in the sample chambers. McFarland et al. discloses a variety of different detectors, some of which are acoustic detectors, though elements 805 and 903 referenced by the Examiner in the Office Action, are not acoustic detectors, but rather are mechanical resonators. McFarland et al. also mentions driving and data devices.

Claim 1 has been amended to require a multiplexer connected between the driving device and the piezoelectric crystals. The purpose of this multiplexer is to multiplex the signals provided to oscillate the piezoelectric crystals. Although McFarland et al. discloses the use of a multiplexer, the multiplexer in McFarland et al. is not used to multiplex the signals used to drive the sensors, but rather is employed to multiplex data signals obtained from the sensors and is connected to the control circuit. See e.g. col. 13, lines 31-50 and Fig. 9 of McFarland et al. Thus, McFarland et al. does not disclose this feature of claim 1. Claims 2-10 all depend from claim 1 and thus are considered to be novel over McFarland et al. for at least this reason.

In addition, McFarland et al. does not teach use of a temperature sensor in contact with a surface of the piezoelectric crystal, as claimed in claim 2. Instead, McFarland et al. discloses a thermistor 807 located in the sample itself. As a result, the temperature measurement and control in the McFarland et al. device is far less reliable than in the present invention. This is because McFarland et al. is subject to local temperature variations in the sample liquid, and variations in the thermal conductivity of each sample. The present invention obtains the temperature of the surface of the piezoelectric crystal which is a much more precise and reliable temperature for use in controlling the temperature of the device. In regard to claim 3, McFarland et al. does not teach use of separate devices in the block and cover for controlling the temperature of the sample chamber either.

Similar arguments apply to method claims 11-21 since claim 11 requires the multiplexing of a signal provided to the piezoelectric crystal, claim 13 includes limitations similar to claim 2 and claim 21 contains limitations similar to claim 3. Thus, claims 11-21 are considered to be novel over McFarland et al. for at least these reasons.

Claims 11-19 have been rejected under 35 U.S.C. §103(a) as being unpatentable over McFarland et al. This rejection is traversed and reconsideration of this rejection in relation to all of claims 1-21 is requested.

McFarland et al. does not make out a case of *prima facie* obviousness against any of claim 1-21 since McFarland et al. does not teach or suggest the use of a multiplexer to multiplex the signal provided to oscillate the piezoelectric crystal. Thus, this element of each of claims 1-21 is lacking from McFarland et al. Accordingly, withdrawal of the rejection over McFarland et al. under 35 U.S.C. 103(a) is requested.

Favorable consideration and issuance of a Notice of Allowance is requested.

Respectfully submitted,

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